

What is Claimed:

1. A layered structure comprising:

a transparent organic layer having a planarized transparent organic surface and a hole; and

a first transparent layer overlying said planarized transparent organic surface only except within said hole.

2. The structure as claimed in claim 1, further comprising a second transparent layer, which has an electrical conductivity and extends over said transparent protection layer and on a bottom and side walls of said hole.

3. The structure as claimed in claim 2, wherein said first and second transparent layers are made of the same material.

4. The structure as claimed in claim 3, wherein said material is indium tin oxide or silicon dioxide.

5. The structure as claimed in claim 3, wherein first transparent layer comprises a transparent protection layer, and said second transparent layer comprises a transparent pixel electrode layer.

6. The structure as claimed in claim 5, further comprising an orientation film extending over said transparent pixel electrode layer and within said hole, wherein said orientation film is in contact with a liquid crystal.

7. The structure as claimed in claim 5, wherein said transparent protection layer has a light-transmittivity of not less than 90% under a condition of a vertical incident of a light having a wavelength in the range of 400-800 nanometers.

8. The structure as claimed in claim 5, wherein said transparent protection layer is gas-permeable.

9. The structure as claimed in claim 8, wherein said transparent protection layer has a relative film density in the range of 50-90%, said relative film density being represented by a volume ratio, excluding cavities and voids.

10. The structure as claimed in claim 5, wherein said transparent protection layer has a thickness of at least about 15 nanometers.

11. The structure as claimed in claim 5, further comprising an inorganic inter-layer insulator underlying said transparent organic insulating layer.

12. A transparent liquid crystal display comprising:

a first substrate;

an inorganic inter-layer insulator layer extending adjacent to said first substrate;

a transparent organic layer having a planarized transparent organic surface and a hole, said transparent organic layer extending adjacent to said first substrate;

a transparent protection layer covering said planarized transparent organic surface except within said hole;

a transparent pixel electrode layer extending adjacent to said transparent protection layer and on a bottom and side walls of said hole;

a first orientation film extending over said transparent pixel electrode layer and within said hole;

a liquid crystal adjacent to said first orientation film;

a second orientation film adjacent to said liquid crystal;

an opposite electrode film adjacent to said second orientation film; and

a second substrate adjacent to said opposite electrode film.

13. The display as claimed in claim 12, wherein said transparent protection layer and said transparent pixel electrode layer are made of the same material.

14. The display as claimed in claim 13, wherein said material is indium tin oxide or silicon dioxide.

15. The display as claimed in claim 11, wherein said transparent protection layer has a light-transmittivity of not less than 90% under a condition of a vertical incident of a light having a wavelength in the range of 400-800 nanometers.

16. The display as claimed in claim 11, wherein said transparent protection layer is gas-permeable.

17. The display as claimed in claim 16, wherein said transparent protection layer has a relative film density in the range of 50-90%, said relative film density being

represented by a volume ratio, excluding cavities and voids.

18. The display as claimed in claim 11, wherein said transparent protection layer has a thickness of at least about 15 nanometers.

19. The display as claimed in claim 41, wherein said transparent pixel electrode film has a thickness in the range of 30-100 nanometers.

20. A display device comprising:

pixel transistors;

a transparent organic insulating film covering said pixel transistors, and said transparent organic insulating film having contact holes; and

transparent pixel electrodes extending over said transparent organic insulating film and within said contact holes and said transparent pixel electrodes being in contact with electrodes of said pixel transistors,

wherein each of said transparent pixel electrodes has a variation in thickness, so that said thickness of said electrode over said transparent organic insulating film is thicker than said electrode within said contact hole.

21. The method as claimed in claim 20, wherein said electrodes has a double-layered structure over said transparent organic insulating film, and has a single-layered structure within said contact hole.